

## APPENDIX B

### VERSION WITH MARKINGS TO SHOW CHANGES MADE

37 C.F.R. § 1.121(b)(iii) AND (c)(ii)

#### SPECIFICATION:

Attached is a marked up copy of page 1 of the specification.

#### CLAIMS:

1. (Amended) A current sense integrated circuit, comprising:
  - an amplifier circuit for receiving and amplifying a differential analog input signal at a first [high] voltage level containing current sense information, wherein the amplifier circuit includes a circuit to minimize inherent temperature offset drift;
  - a pulse width modulator circuit for converting the differential analog input signal to a pulse width modulated signal at the first [high] voltage level;
  - a level shift circuit for converting the pulse width modulated signal from the first [high] voltage level to a second [low] voltage level; and
  - a recovery circuit for reconstructing the analog input signal at the second [low] voltage level.
3. (Amended) The current sense integrated circuit of claim 1 [2], wherein the circuit to minimize inherent temperature offset drift comprises a pair of mirrored MOSFETs, such that the circuit has an offset voltage which is equal to the difference between the gate-to-source voltage of the MOSFETs and remains constant over temperature variations.
5. (Amended) The current sense integrated circuit of claim 1, wherein the level shift circuit comprises a pulse generator circuit for producing rising edge triggered pulses and falling edge triggered pulses from the pulse width modulated signal and a pair of MOSFETs for receiving the rising edge triggered pulses and the falling edge triggered pulses and transposing those pulses from the first [a high] voltage level to the second [a low] voltage level.

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CIRCUITRY FOR A HIGH  
VOLTAGE LINEAR CURRENT SENSE IC

This application claims the benefit of U.S. Provisional Application Serial No. 60/130,648 filed April 23, 1999, U.S. Provisional Application Serial No. 60/166,727 filed November 22, 1999, and U.S. Provisional Application Serial No. 60/166,728 filed November 22, 1999.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

The present invention relates to circuitry for a high voltage integrated circuit (IC), and, more specifically, to a differential amplifier circuit that can amplify a differential signal in the hundreds of millivolts near the high voltage power supply, minimize inherent temperature offset drift, and generate a high side current reference in a current sense IC.

2. Description of the Related Art:

The circuitry of a high voltage current sense IC, such as the IR2171 current sense IC sold by International Rectifier Corporation of El Segundo, California, <sup>is</sup> disclosed in U.S. Patent Application Serial No. <sup>6,215,435</sup> ~~09/266,822~~ filed ~~March 12, 1999~~, the entire disclosure of which is incorporated herein by reference.

The IR2171 provides a circuit for transferring static or time variable analog information without electrical isolation from a first (source) reference potential to a second (destination) reference potential.

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